

AMENDMENTS TO THE CLAIMS

1-5. (Canceled without prejudice).

6. (Original) A method for fabricating a CMOS image sensor, comprising the steps of:

- a) providing a semiconductor structure;
- b) forming an insulating layer on the semiconductor structure;
- c) selectively etching the insulating layer to form a trench;
- d) coating a dyed photoresist on the insulating layer, wherein the dyed photoresist covers the trench;
- e) carrying out an exposure operation and a development operation on the dyed photoresist to thereby obtain a color filter pattern; and
- f) performing a thermal treatment, so that the color filter pattern develops a convex shape.

7. (Original) The method as recited in claim 6, wherein the semiconductor structure includes a light sensing element and a peripheral circuit.

8. (Original) The method as recited in claim 7, wherein the light sensing element is a photodiode.

9. (New) The method as recited in claim 6, wherein the trench is filled with air through the thermal treatment.

10. (New) A method for fabricating a CMOS image sensor, comprising the steps of:

- a) providing a semiconductor substrate;
- b) forming a photodiode in the semiconductor substrate;
- c) forming an insulating layer on the semiconductor structure;
- d) selectively etching the insulating layer to form a trench over the photodiode;
- e) coating a dyed photoresist on the insulating layer, wherein the dyed photoresist covers the trench;
- f) carrying out an exposure operation and a development operation on the dyed photoresist to thereby obtain a color filter patter; and
- g) performing a thermal treatment, so that the color filter pattern develops a convex shape and the trench is filled with air.